

SBP – SKILL BLOCK PLAN  
BRIDGE MAINTENANCE

ENTRY LEVEL

CODE	SKILL BLOCK	REQUIREMENTS	COMPLEMENT	VALUE
1B1 * Complete 3 of 5	A. Small Hand & Power Tools B. Introduction to Work Zone Traffic Control Devices C. Basic two-way Radio Communication  D. Operation of Chain Saw E. Introduction to Erosion Control	*A. View “Hand & Power Tool Safety” Video #226 *B. View “Basic Traffic Control” Video #301  *C. Complete Basic Two-Way Radio Communications Guide EQP-529 (161080046) *D. Complete Chain Saw Guide EQP-507 (161080020) *E. View Erosion Control video <b>( Complete self-study manual) (1M1) ( MNT497)</b>  <b>NOTE:</b> A, B, C & E Perform work to instructor’s satisfaction	No Limit	\$312
1B2 *	Operate 1 Piece of Category A Equipment	Prerequisite: 1B4 Complete Dump Truck Course EQP-415 (161080003)	No Limit	\$416
1B3 *	Operate Second Piece of Category A Equipment	*Complete one (1) category A equipment guide	No Limit	\$312
1B4	Commercial Drivers License	Obtain a Commercial Drivers License with required endorsements from the Division of Motor Vehicles	No Limit	\$0
1B5 *	Securing & Hauling Loads	<b>Complete ( Securing and Hauling Cargo )( MNT 579 )</b>	No Limit	\$312
1B6 *	Carpenter Hand Power Tools	Complete “Basic Carpenter Work” BRG-563 (161080098)	No Limit	\$312
1B7 *	Concrete Transporting, Placing, and Finishing	Complete “Concrete Placement” BRG-567 (161080102)	No Limit	\$312
1B8 *	Rigging Loads for Lifting	Demonstrate skills to the satisfaction of supervisor on five (5) operations & view Video # B-05	No Limit	\$312

SBP – SKILL BLOCK PLAN  
BRIDGE MAINTENANCE

1B9 *	Operate Third Piece of Category A Equipment	*Complete one (1) category A equipment guide	No Limit	\$312
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Requirements to advance to Intermediate Level:

- Minimum time requirement at Entry Level: 2 years
- Recommend completion of Skill Blocks:  
1B1, 1B2, 1B3, 1B5, 1B6, 1B7, & 1B8

**Notes:**

Employee must perform the work represented by a Skill Block at or above their level on at least an occasional basis to continue to receive increment pay.

Completion of a course means:

1. Completion of course study manual
2. Take and pass ETG test
3. Complete OJT to mentor's satisfaction
4. Complete Certification Test
5. Assume duties on at least occasional basis

- Quick reference for denoting Skill Blocks requiring an OJT instructor. The "\*" in the "Requirements" column indicates the specific portion of training that requires assignment of an OJT instructor. The OJT can be an engineer, supervisor, or transportation worker. The transportation worker OJT's must attend the SBP-400 instructor training course. SBP-400 is recommended for transportation supervisor level OJT's.

CATEGORY "A" EQUIPMENT	
Air Compressor	EQP-400 (161080000)
Forklift	SAF-240
Medium Dump Truck	EQP-415 (161080003)
Vibrator Roller Compactor	EQP-556 (161080088)

SBP – SKILL BLOCK PLAN  
BRIDGE MAINTENANCE

INTERMEDIATE LEVEL

COD E	SKILL BLOCK	REQUIREMENTS	COMPLEMENT	VALUE
2B1 *	Preventative Maintenance on mechanical parts for movable/draw bridges	Perform preventative maintenance on mechanical parts of movable/draw bridges to the satisfaction of supervisor for a period of six (6) months <b>Complete Drawbridge Preventative Maintenance ( BRG 580 )</b>	No Limit	\$312
2B2 *	Basic cutting of structural steel using acetylene torch	<b>Complete “Torch Cutting” BRG-570 (161080105)</b>	No Limit	\$312
2B3 *	Conduct Flagging Operations	Complete Flagging School SAF-238 and perform flagging operation as required to the satisfaction of the supervisor for a period of 40 hours.	No Limit	\$208
2B4 *	<b>Concrete Quality Control</b>	<b>Complete “ Concrete Concepts” BRG-568 (161080103)</b>	No Limit	\$416
2B5 *	Deleted			
2B6 *	Placing and tying reinforcing steel	Complete Reinforcing Steel BRG-160 (161080080)	No Limit	\$208
2B7 *	Operate 1 piece Category B Equipment	*Complete one (1) Category B equipment guide	No Limit	\$624
2B8	Snow and Ice Control	A. Prerequisite 1B2 *B. Complete Snow and Ice Control chapter EQP-415 (161080003) *C. Operate snow and ice control equipment for 16 hours during storm conditions to instructor’s satisfaction	No Limit	\$312
<b>2B9</b>	<b>Operate Second piece Category B Equipment</b>	<b>*Complete one (1) Category B equipment guide</b>	<b>No Limit</b>	<b>\$624</b>

Requirements to advance to Journey Level:

- Minimum time requirement at Intermediate Level: 2 years
- Recommend completion of Skill Blocks: 2B2, 2B3, 2B4, & 2B6

CATEGORY “B”	
Front End Loader	EQP-445 (161080011)
Tandem Dump Truck	EQP-415 (161080003)

SBP – SKILL BLOCK PLAN  
BRIDGE MAINTENANCE

SBP – SKILL BLOCK PLAN  
BRIDGE MAINTENANCE

JOURNEY LEVEL

CODE	SKILL BLOCK	REQUIREMENTS	COMPLEMENT	VALUE
3B1 *	Pipe installation & drainage maintenance	A. Complete Drainage Excerpts & Pipe Installation Course MNT-481 (161080027) B. Complete Pipe Installation & Maintenance of 54” and larger BRG-190 (161080083) C. Complete Elevation and Grade Manual MNT-489 (161080063)	No Limit	\$520
3B2 *	Perform Abrasive Blasting and Operate other Cleaning Devices	Complete Abrasive and other cleaning Devices ( BRG 572)	No Limit	\$624
3B3 *	Skilled form and carpentry work; layout form construction	Complete concrete form construction BRG-195 (161080076)	2 per work group	\$520
3B4 *	Replace, repair, and maintain machinery and component parts on drawbridge	Prerequisite: 2B1 Perform operations to the satisfaction of the supervisor on two (2) operations and smooth operation of opening bridge.	20 statewide	\$416
3B5 *	Certified Concrete Technician Level I and Inspection	A. Prerequisite: 1B7 and 2B4 B. Complete M&T Level 1 Concrete course C. Complete NCDOT Standard Specifications. Sections 420, 1000 BRG-562 (161080097)	1 per work group	\$728
3B6 *	Rig and set piles and cut off piles	Complete Pile Driving BRG-170 (161080081)	2 per work group	\$416
3B7 *	Operate 1 Piece of Category C Equipment	Complete one (1) category C equipment guide	2 per crew, plus 2 for each crew w/backhoe	\$1,040
3B8	Drill, cut, and fit structural steel to close tolerance	Complete “ Drill and Cut Metal” BRG-573 (161080108)	2 per work group	\$520

SBP – SKILL BLOCK PLAN  
BRIDGE MAINTENANCE

3B9	Demolition boring, site preparation for explosives	Demonstrate skills to the satisfaction of supervisor on two (2) operations	1 per crew	\$312
3B10 *	Lead worker on bridge crew with supervision by mentor	A. Demonstrate skills to the satisfaction of supervisor for 52 weeks. B. Complete TW's Transition to Leadership SBP-300 C. Basic Work Zone Safety Course SAF-500	1 per work group	\$1,040
3B11 *	Certified conventional density technician <b>for soils and stone</b>	<b>Complete Conventional Density School and receive certification from NCDOT Materials &amp; Tests Unit</b>	1 per Division	\$728
3B12	Plan development and layout of traffic control in a work zone for two lane roads	A. Complete Basic Work Zone Safety Course SAF-500 B. Implement traffic control in work zones for six months to instructor's satisfaction	No Limit	\$728
3B13	Transport by truck and trailer with gross haul weight rated 10,000 lb. and above	A. Prerequisite: Class A CDL B. Complete Trailer (Tow Type) EQP-516 (161080032)	No Limit	\$416
3B14 *	Installation & Maintenance of Erosion Control Devices	A. * Complete Installation & Maintenance of Erosion Control Devices MNT-564 (161080099) B. Review video, Installation & Maintenance of Erosion Control Devices C. <b>Perform operation for six months to instructor's satisfaction</b>	No Limit	\$416

Requirements to advance to Advanced Level:

- Minimum time requirement at Journey Level: 3 years
- Recommend completion Skill Blocks: 3B1, 3B2, & 3B6

CATEGORY "C"	
Backhoe	EQP-514 (161080030)
Tractor Trailer (Low Boy)	EQP-520 (161080037)
Truck Mounted Crane	EQP-565 (161080010)

SBP – SKILL BLOCK PLAN  
BRIDGE MAINTENANCE

ADVANCED LEVEL

CODE	SKILL BLOCK	REQUIREMENTS	COMPLEMENT	VALUE
4B1	Read and Interpret Plans; calculate concrete quantities and place orders; plan reading and layout; directing the drilling and cutting of holes; directing the erection of steel beams	A. Complete SSC-010, SSC-012, SSC-030 B. Study Portion of NC SS R&S “Specs” for project being built C. Demonstrate skills to the satisfaction of supervisor for three (3) months	1 per work group	\$1,040
4B2 *	Carpenter Materials, Fasteners, and Plan Reading	Complete Advanced Carpenter Work BRG-566 (161080101)	1 per work group	\$624
4B3	Plan development and layout of traffic control in work zone for multi-lane roads	A. Complete Intermediate Work Zone Safety Course SAF-505 B. Implement traffic control in a work zone to current standards and to instructor satisfaction for six (6) months	1 per work group	\$728
4B4 *	Direct crane operation; layout and calculate pile operation	Complete Directing Pile Driving BRG-180 (161080082)	1 per work group	\$624
4B5	<b>Lead Worker for</b> Direct repair and maintenance work on moveable span/draw bridges and operate draw bridge in an emergency	A. Prerequisite: 3B4 B. Supervisor certification of knowledge and skills	10 statewide	\$728
4B6 *	Establish centerlines and grades with survey instruments	A. Completion of Technical Training Series “Beginning Construction Layout” SSC-140 B. Perform activity for six (6) months to instructor satisfaction	1 per work group	\$728

SBP – SKILL BLOCK PLAN  
BRIDGE MAINTENANCE

4B7 *	Supervise fully operated rental equipment operations	A. Prerequisite: 3B7 and 4B3 B. Complete “Rental Equipment Supervisor Manual” MNT-490 (161080064) C. Supervise fully operated rental equipment for six (6) months to instructor satisfaction	2 per division	\$936
4B8 *	Assist in plan development and layout of erosion control devices	Complete course Erosion Control and Design Manual ( BRG 210 ) (16680096)	1 per crew	\$520
4B9 *	A. Oversee sandblasting (quality and safety) or B. Oversee containment measures developed by Transportation Supervisor or C. Oversee paint operation including record keeping, quality of work, quantities	A. Prerequisite: 3B2 B. Abrasive Blasting and Power Tools for Coating Removal BRG-572 (161080107) C. Oversee two (2) sandblasting and two (2) painting operations	1 per crew.	\$520
4B10	Serve as competent person on trenching and shoring operations	Completion of Competent Person – Trenching, Shoring, Excavation Course – SAF-250	1 per work group	\$832
4B11 *	Oversee installation and maintenance of ramp and lift system for ferry docks	Demonstrate skills to the satisfaction of supervisor on five (5) operations	5 Statewide	\$728
4B12 *	Explosives specialist, loading, detonation; develop shot plans, determine safety issues	A. Completion of Explosives Specialist Training SAF-150 B. Maintain certification through SAF-151 every three years	2 per division	\$832
4B13	Unit administered contracts – inspection of work, record keeping (including calculating pile driving data) and calculating quantities	A. Completion of Purchase Order Contract Training – SSC-120 B. Prerequisite: 4B4 and 4B1	1 per crew	\$728



SBP – SKILL BLOCK PLAN  
BRIDGE MAINTENANCE

4B14	Structural Welding	A. Materials & Tests Unit Certification B. Demonstrate skills to the satisfaction of supervisor on five (5) operations	1 per crew	\$832
4B15	Operate 1 piece of Category D Equipment	Complete one (1) category D equipment guide	35 statewide	\$1,040
4B16	Lead worker on a bridge crew without supervision	A. Prerequisite: 3B10 B. Completion of TW's Introduction to Supervision SBP-510 (formerly Concepts of Leadership)	1 per work group	\$624
4B17	Instructor: Equipment Training Guides, Procedural Training Manuals, or Other Formal Training needs	A. Complete On The Job Training Course SBP-400 B. Satisfactorily complete assigned training duties to the satisfaction of Supervisor	No Limit	\$520
4B18	Third Party Company Examiner (CDL – Road Test and Certification)	Complete certification by Division of Motor Vehicles and be an examiner	1 per area	\$520
4B19	Operate second piece of category C equipment	Complete second category C equipment guide	1 – 2 per C Equipment	\$520

CATEGORY "D"	
Lattice Crane	EQP-569 (161080104)
Rubber Tire Excavator	EQP-524 (161080041)
Track Excavator	EQP-523 (161080040)
Tug Boat	

SBP – SKILL BLOCK PLAN  
BRIDGE MAINTENANCE

SPECIALIST LEVEL

CODE	SKILL BLOCK	REQUIREMENTS	COMPLEMENT	VALUE
5B2 *	Senior Lead Worker	A. Prerequisite: Complete SBP-300 * B. Complete Field Maintenance Manual MNT-482 (161080028) C. Complete “Introduction to Supervision” SBP-510 **D. Perform work for 6 months to supervisor’s satisfaction (to include issue work assignments, review of work, provide technical assistance, and conduct minor training)	1 per crew (A crew is lead by a TS I with 4 or more workers)	\$1,040
5B3 *	Senior Instructor: Equipment Training Guide (including Category D equipment Guides), Procedural Training Manuals, or other formal training	A. Prerequisite: “On The Job Training” SBP-400 B. Prerequisite: Level 5 C. Complete “Essential Skills for OJT Trainers” SBP-500 **D. Complete training duties for 6 months to supervisor’s satisfaction	DBE sets limit – not to exceed number of “D” pieces of equipment	\$832

- The “\*” in the “Requirements” column indicates the specific portion of training that requires assignment of an OJT instructor. The OJT instructor can be an engineer, supervisor, or instructor (4B17), or senior instructor (5B2).
- The double “\*\*” indicates the need for the OJT instructor to be an engineer, supervisor, or senior instructor.

CATEGORY “D”	
Lattice Crane	EQP-569 (161080104)
Rubber Tire Excavator	EQP-524 (161080041)
Track Excavator	EQP-523 (161080040)
Tug Boat	